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FIG. 1 A.

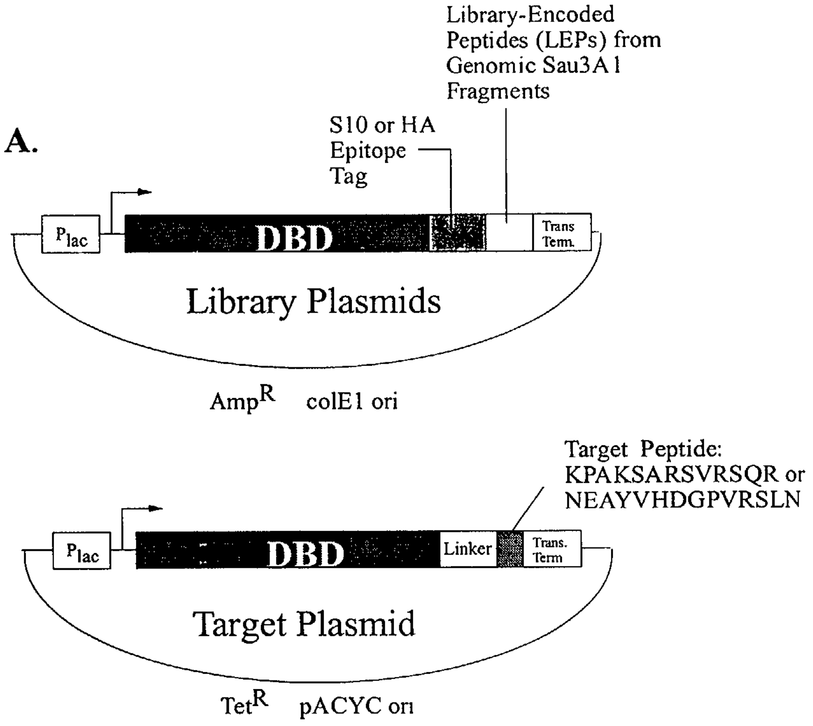
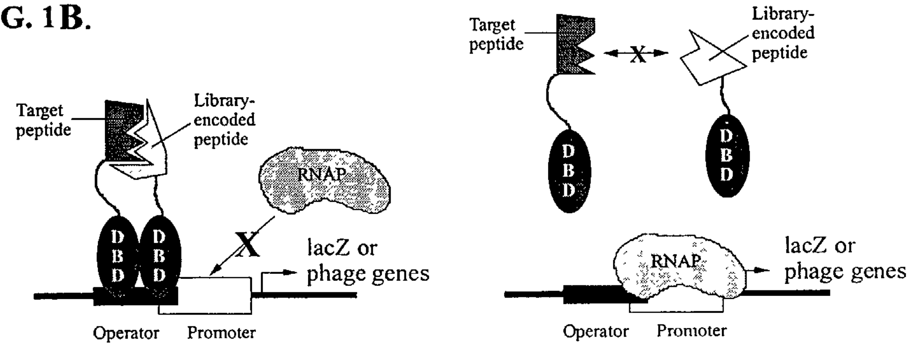


FIG. 1B.



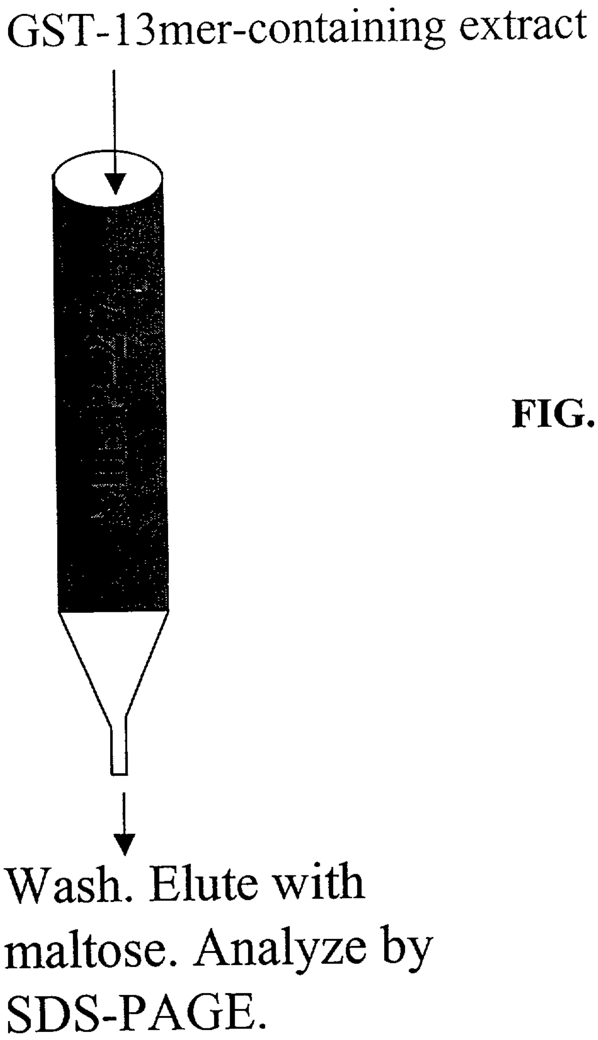


FIG. 2

13mer target: KPAKSARSVRSQR
27mer Library-encoded peptide:
THTTSQTTLRDPDVYAGARWVTWRVGA

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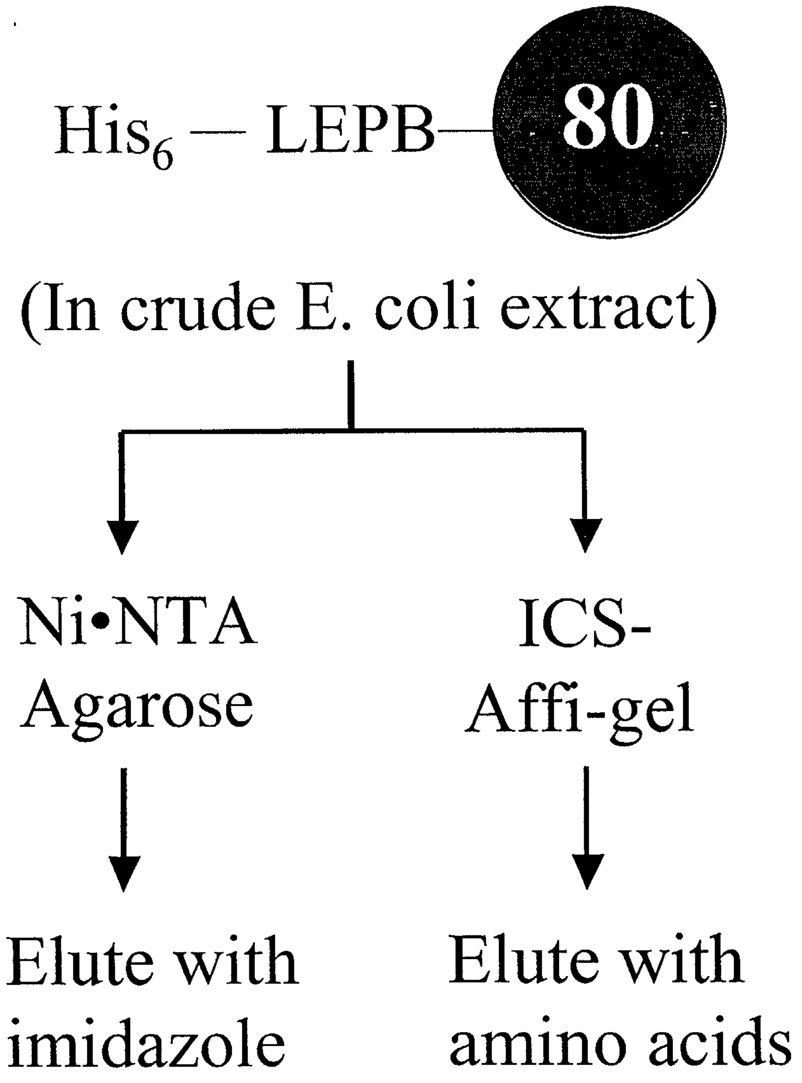

His6 — LEPB—
80
(In crude E. coli extract)
Ni•NTA Agarose
ICS-Affi-gel
Elute with imidazole
Elute with amino acids

FIG. 3

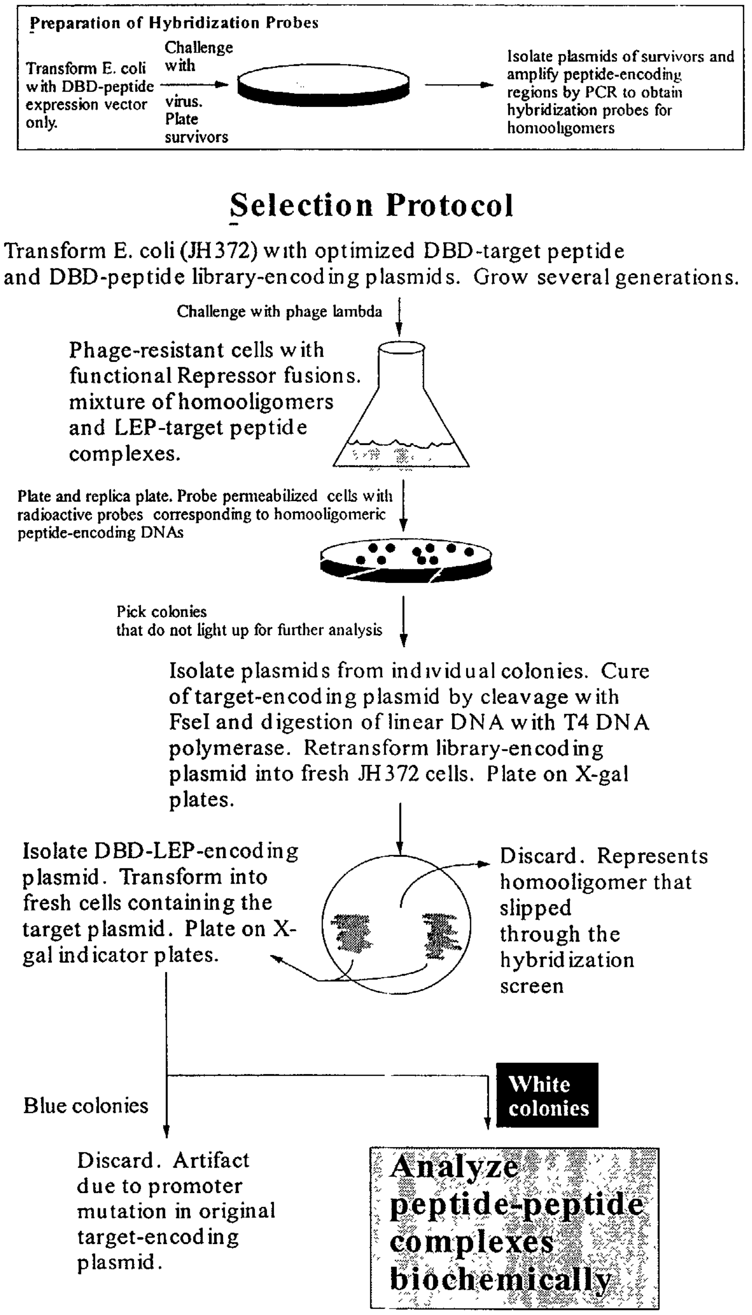
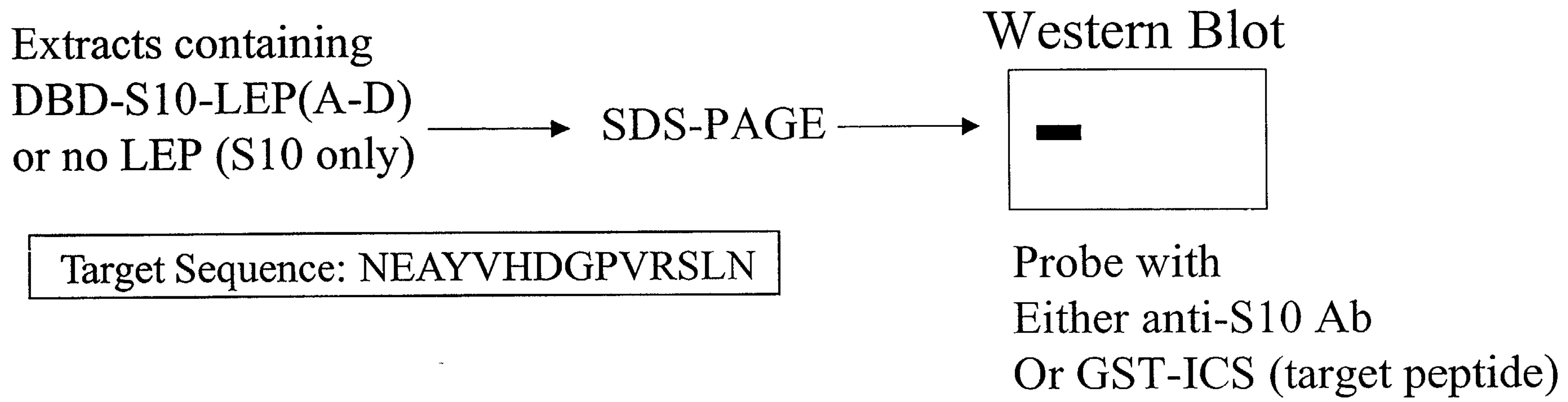
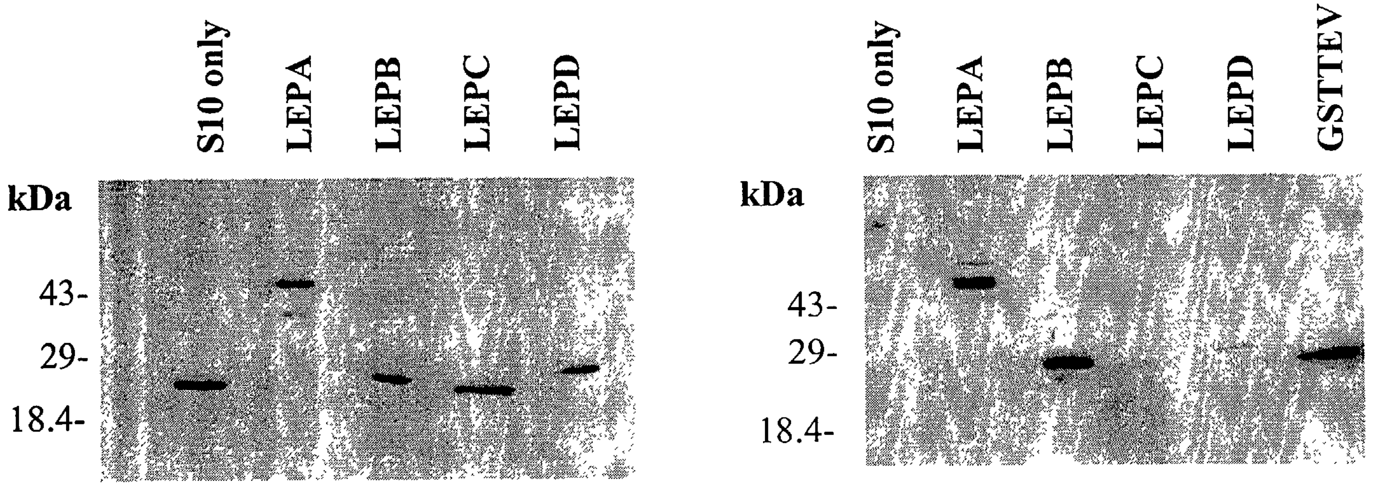

Preparation of Hybridization Probes
Transform E. coli with DBD-peptide expression vector only.
Challenge with virus. Plate survivors
Isolate plasmids of survivors and amplify peptide-encoding regions by PCR to obtain hybridization probes for homooligomers
Selection Protocol
Transform E. coli (JH372) with optimized DBD-target peptide and DBD-peptide library-encoding plasmids. Grow several generations.
Challenge with phage lambda
Phage-resistant cells with functional Repressor fusions. mixture of homooligomers and LEP-target peptide complexes.
Plate and replica plate. Probe permeabilized cells with radioactive probes corresponding to homooligomeric peptide-encoding DNAs
Pick colonies that do not light up for further analysis
Isolate plasmids from individual colonies. Cure of target-encoding plasmid by cleavage with FseI and digestion of linear DNA with T4 DNA polymerase. Retransform library-encoding plasmid into fresh JH372 cells. Plate on X-gal plates.
Isolate DBD-LEP-encoding plasmid. Transform into fresh cells containing the target plasmid. Plate on X-gal indicator plates.
Discard. Represents homooligomer that slipped through the hybridization screen
Blue colonies
White colonies
Discard. Artifact due to promoter mutation in original target-encoding plasmid.
Analyze peptide-peptide complexes biochemically

FIG. 4



Target Sequence: NEAYVHDGPVRSLN

FIG. 5



Anti-S10 Ab

GST-ICS (target peptide)

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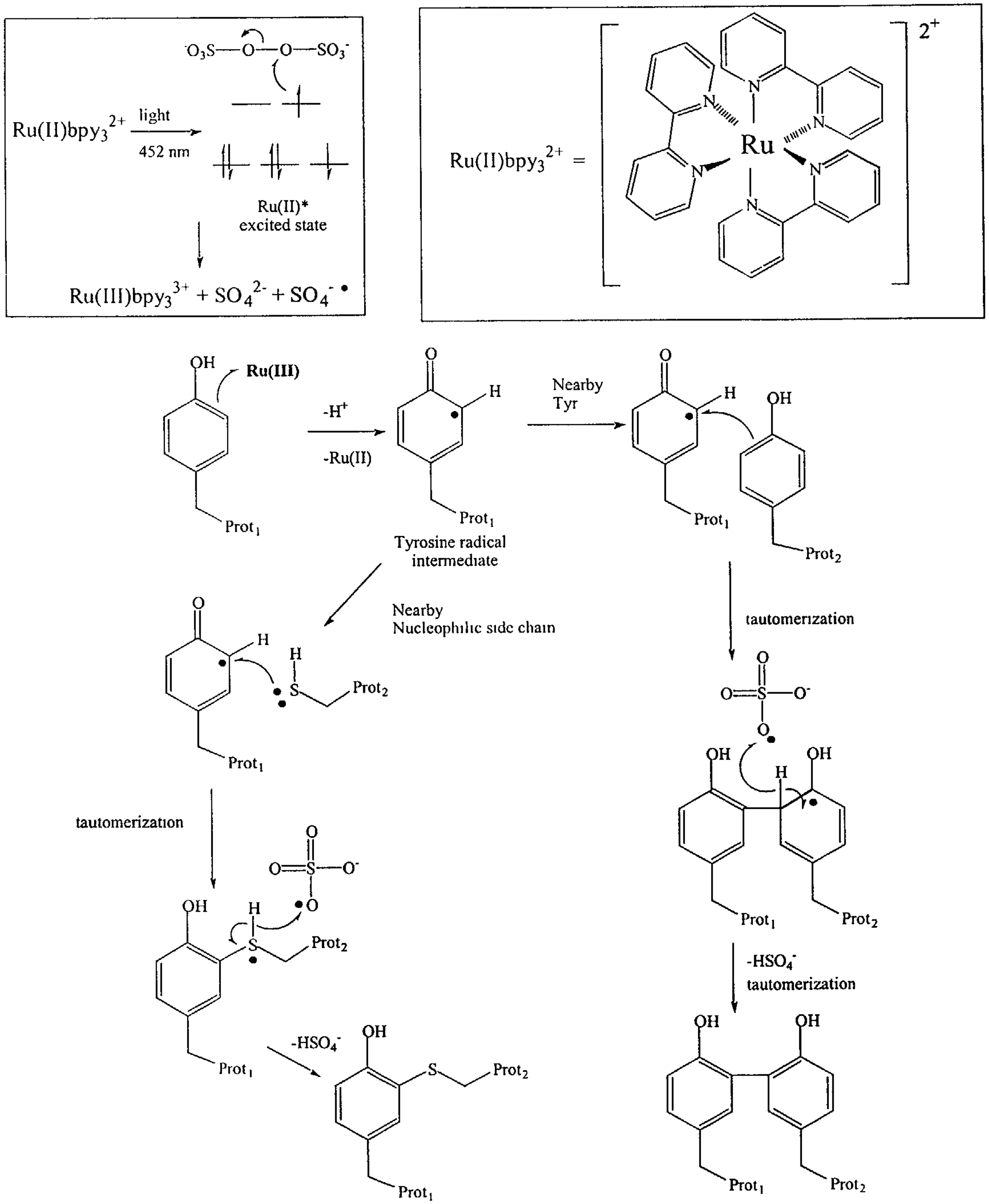
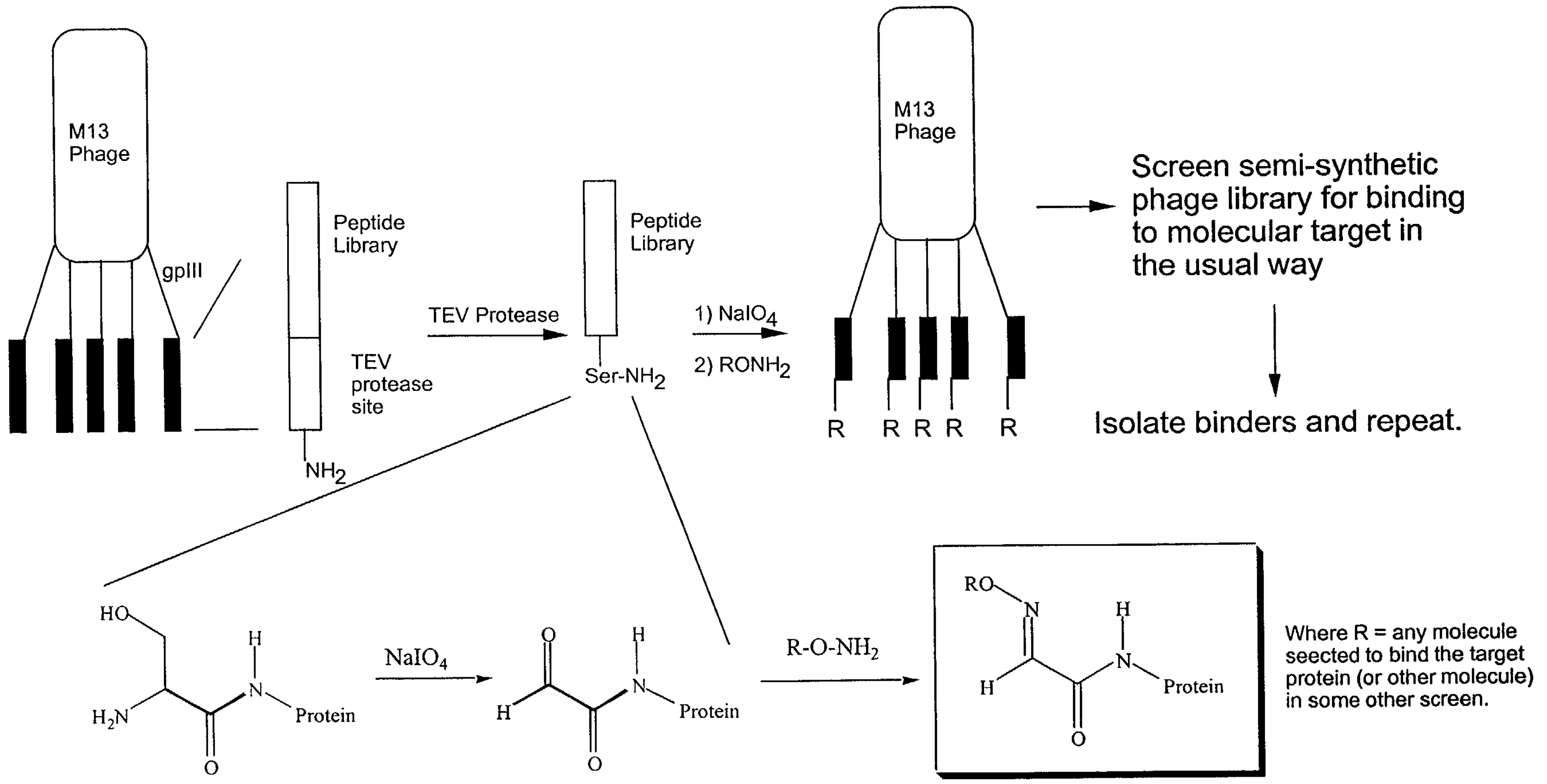


FIG. 6

FIG. 7



Screen semi-synthetic phage library for binding to molecular target in the usual way

Isolate binders and repeat.

Where R = any molecule seected to bind the target protein (or other molecule) in some other screen.

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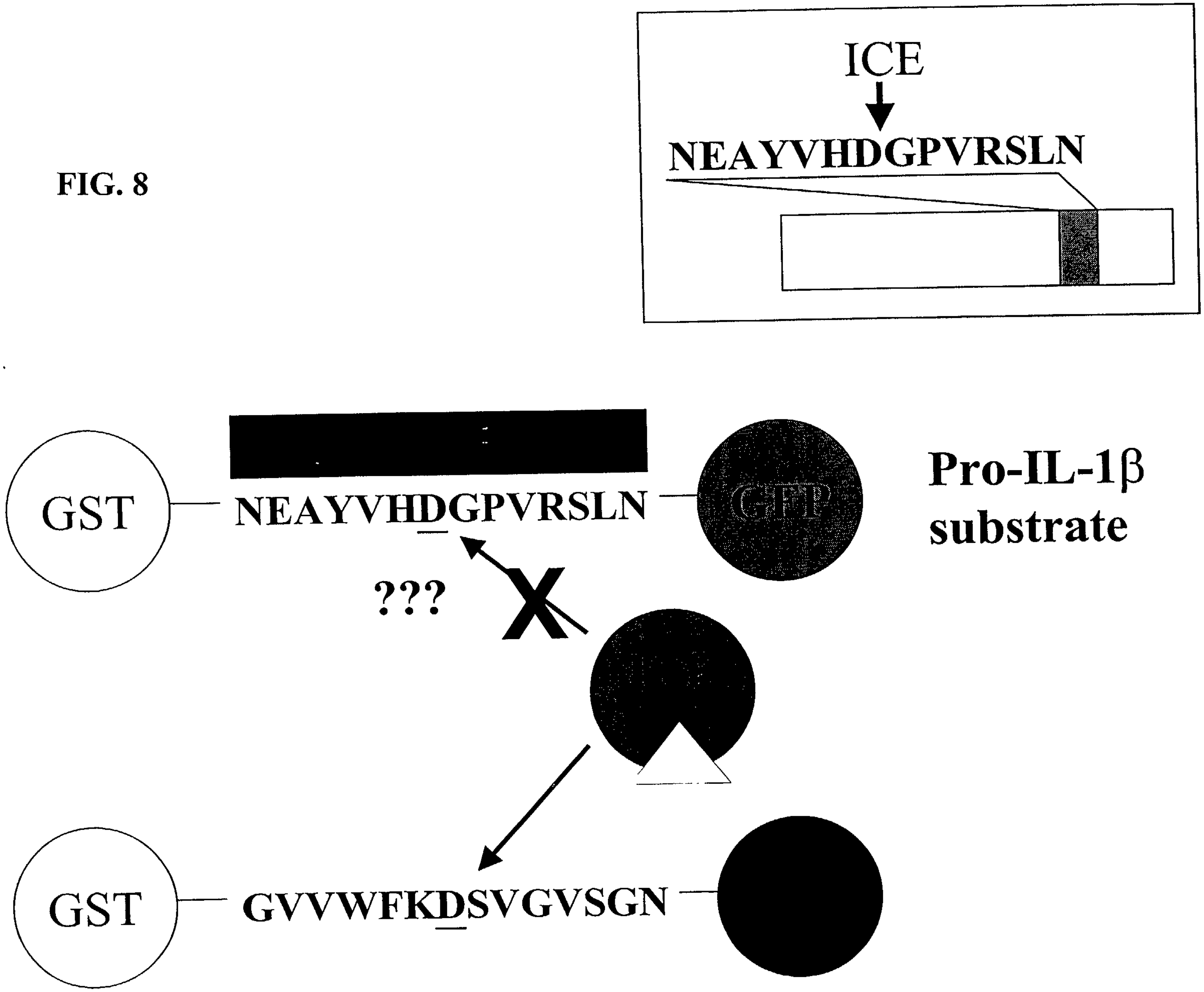
FIG. 8



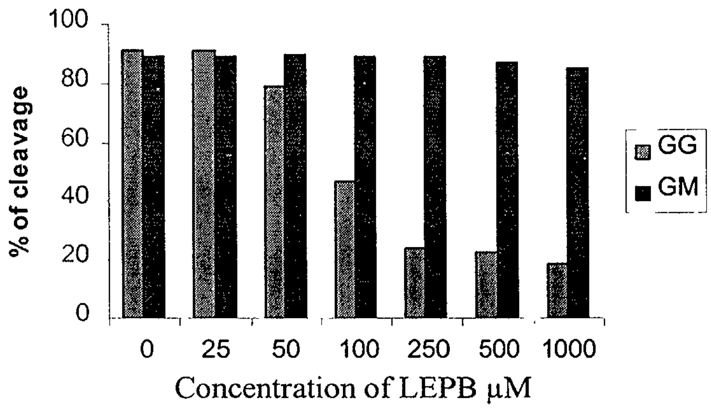

100
80
60
40
20
0
% of cleavage
0
25
50
100
250
500
1000
Concentration of LEPB μM
GG
GM

FIG. 9